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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/261,080	03/02/1999	KARL-HEINZ SCHUSTER	Z-98005.5.US	7285

7590 11/26/2001

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EXAMINER

FULLER, RODNEY EVAN

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 11/26/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/261,080

Applicant(s)
Schuster, et al.

Examiner
Rodn y Fuller

Art Unit
2851



-- Th MAILING DATE of this communication app ars on the cover sh t with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Sep 10, 2001

2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1, 2, 4, 5, 7-11, and 13-19 is/are pending in the applica

4a) Of the above, claim(s) _____ is/are withdrawn from considera

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1, 2, 4, 5, 7-11, and 13-19 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirem

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. _____.
- ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 10
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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DETAILED ACTION

Remarks

In response to applicant's Amendment, dated March 26, 2001; the examiner acknowledges the cancellation of claim 12 and the addition of claim 19. Claims 1, 2, 4, 5, 7-11 and 13-19 are pending.

The amendments to claim 11 and 15 have addressed all the claim objections set forth in the Office Action mailed June 5, 2001.

The amendment to claim 13 has addressed all the U.S.C. 112 rejections set forth in the Office Action mailed June 5, 2001.

Regarding the U.S.C. 103(a) rejection of claims 1, 2, 8, 9, 17 and 18 as being unpatentable over Ito (US 5,866,280) in view of Szarmes (US 5,590,148); the applicant makes the argument (page 7, last paragraph to page 8, 1st paragraph of Amendment) that "...Szarmes deals with birefringent beamsplitters" and that "...Szarmes in no way specifies the choice of orientation in Applicant's claim 1." The examiner has considered the applicant's arguments in light of the amended claims and maintains the rejection. The examiner maintains that with the disclosure of Szarmes (US 5,590,148) it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ito (US 5,866,280) by wherein "the principal axis of said crystal is substantially perpendicular to the surface of said reticle." (*See rejection below*)

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Regarding the U.S.C. 103(a) rejection of claims 4, 5, 7, 10-12 and 14 as being unpatentable over Ito (US 5,866,280) in view of Szarmes (US 5,590,148) as applied to claims 1, 2, 8 and 9 above, and further in view of Ashida (US 6,153,877); the applicant makes the argument (page 8 of 4th paragraph of Amendment) that "...these claims are patentable because they depend on claim 1." The examiner has maintained rejection of claims 1, 2, 8, 9, 17 and 18 (see above); hence, the U.S.C. 103(a) rejection of claims 4, 5, 7, 10-12 and 14 is also maintained.

Regarding the U.S.C. 102(b) rejection of claims 15 and 16 are as being anticipated by Kubota, et al. (US 5,370,951); the applicant makes the argument that "claim 15 recites that the body of the pellicle is made of fluoride crystal, not the organic material disclosed in Kubota" and that "a thin film MgF_2 or similar antireflection layer generally is amorphous, not crystalline." (Underline emphasis added by applicant) The examiner has considered the applicant's arguments and maintains the rejection. Claim 15 states "A pellicle of fluoride crystal." The claim does not specify what part of the pellicle is composed of fluoride crystal, i.e., the claim does not "...recite that the body of the pellicle is made of fluoride crystal" as argued by the applicant. (Underline emphasis added) Furthermore, the examiner maintains that Kubota discloses a pellicle made with magnesium fluoride. (See rejection below)

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 8, 9, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito (US 5,866,280) in view of Szarmes (US 5,590,148).

Ito (US 5,866,280) discloses “a reticle with support material of transparent, optically uniaxial crystal” and “a reticle based on MgF_2 support material.” (See claim 3) However, Ito (US 5,866,280) does not specifically disclose wherein “the principal axis of said crystal is substantially perpendicular to the surface of said reticle.” Szarmes (US 5,590,148) discloses (column 16, lines 23-35) that: “In all designs employing uniaxial crystal, the two preferred orientations of the optical c-axis are the ones ...” “in which the c-axis lies in the plane of the crystal, or the c-axis posses a projection onto the plane of incidence which is perpendicular to the surface of the crystal.” Hence, it would have an obvious to one having ordinary skill in the art at the time the invention was made to modify Ito (US 5,866,280) by wherein “the principal axis of said crystal is substantially perpendicular to the surface of said reticle,” since it has been held to be within the general skill of a worker in the art to select a known material, or orientation of material, on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

3. Claims 4, 5, 7, 10, 11, 13, 14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito (US 5,866,280) in view of Szarmes (US 5,590,148) as applied to claims 1, 2, 8 and 9 above, and further in view of Ashida (US 6,153,877).

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A further difference between modified Ito (US 5,866,280) and the claimed invention is “a cooling device.” However, the use of a “cooling device” in a photolithography system is routine in the art as is evident from the teaching of Ashida (US 6,153,877) (see abstract). Thus it would have been obvious to one of ordinary skill at the time the invention was made to further modify Ito (US 5,866,280) by including a “cooling device.” The ordinary artisan would have been motivated to further modify Ito (US 5,866,280) in the manner described above for at least the purpose of improving the pattern position precision by stabilizing the temperature of the reticle as described by Ashida (US 6,153,877) in column 1, lines 29-40.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Kubota, et al. (US 5,370,951).

Kubota (US 5,370,951) discloses a pellicle made with magnesium fluoride (see column 8, lines 12-33). Hence, Kubota (US 5,370,951) discloses (claim 15) a “pellicle of fluoride crystal,” and (claim 16) wherein the fluoride is “...selected from the group of CaF_2 , BaF_2 , or MgF_2 .

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Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Fuller whose telephone number is (703) 306-5641. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams, can be reached on (703)308-2847.


RUSSELL ADAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

REF

November 14, 2001